

# An Essay on Concept and Essencials of Acclimatization

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On what conditions should acclimatization-theory be established as a science?

In analyzing the concept of acclimatization scientifically, we find are several prevailing interpretation of the concept but cannot find an overall established and accepted interpretation of the concept. Thus the confusion apparent in the literature of the field of acclimatization is partly a result of this lack of a generally accepted meaning of the term. An outstanding example of this kind of confusion is that some writers affirm the acclimatizability of the white race in the tropics, while others deny it. Because of this lack of general agreement about the concept we feel keenly the need to provide a workable definition of acclimatization in order to further its study.

*Section I. Definition of acclimatization:* In both Broad and Narrow Senses.

Some physiologists define acclimatization wholly in terms of man's ability to adapt himself to changes in atmospheric conditions or climatic changes. Doctors Vernon, Yaglou and others seem to follow this narrow interpretation. But in many cases we might more accurately call this ability seasonal adaptation rather than acclimatization, since changes included within this definition may be due not to variations in geographically different localities, but to research in the science of acclimatization, which they carried on in the same locality.

A broader definition of acclimatization than this is suggested in the following. We know that man has been provided with the ability to adapt to almost any kind of climate. Because the birth

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placé of primary man is situated between both of the tropics, and since his appearance he has experienced great climatic changes as he spread all over the globe. If the meaning of acclimatization were interpreted in a broad sense, scientists should not have need to do research in the science of acclimatization, which they carried on since the middle of the nineteenth century. In fact, should the notion that acclimatization is not easily attained by man prevail, and if it could be supported by many historical evidences of this failure in this regard, then we would feel keenly the necessity to engage in research about it, to work out some measures to find a solution to this problem. Thus we want to distinguish the meaning of acclimatization as treated here in this article as being something different from what nature could have accomplished alone through the transit of man in the several thousand years of his history.

Section II. *Three conditions on which acclimatization theory should be established.*

(1). The problem of Generation.

Acclimatization in the broad sense mentioned above refers to the results of adaptation of man that have been attained over the passage of extraordinarily long periods of time, through both prehistoric and historic ages; that is, the results attained by successive selection and variation in races. Consequently, the fewer generations we make an object of research, the greater is the extent of damage to one race from climatic influence, and the greater is the difference between races of damage from climatic influence. In short, since acclimatization has a temporal element, we should restrict our research to a single generation. A single generation it most important be studied. (Ripley). We should also investigate the following generation. (Grober). This is similar to the opinion that fertility is the index of acclimatization. (Monge). The destiny of the third generation seems to be an important, temporal limitation to research on acclimatization, according to Grober's actual experience. Consequently, we would need also historical confirmation by the source material of colonial history for such research.

Having witnessed the existence of pure type Franks and Vandals that were descendants of the early invaders who spread from Europe to Algeria, on the street of Algiers in 848, Dr. Armand concluded that such a historical evidence confirms the acclimatiz-

ability of Europeans in recent years. But he did not refer to the problems of any single generation. From the time of their first invasion of Algeria until 1848, more than thirteen hundred years had passed. We think that the continuance itself of the pure type of race through such a long period is not a satisfactory index of acclimatization, but an ostensible index of it, if it is not certified how a single generation could acclimatize there, since the pure type will persist as long as a single generation is not extinct.

### (2). The Problem of Race.

We have no doubt as to the existence of individual differences in acclimatizability. But we should not confuse the tolerability of individuals and of great populations. (Price). Not a peaceful survival or ascending existence of individuals, but of *Gattung* race, is an important problem of acclimatization (Grober). Consequently we should not take all of mankind or selected individuals, but take race itself as the unit of observation for study.

We must find scientifically the differences in acclimatizability, i. e., between negroid, mongoloid, and caucasoid. Acclimatization is a science to study racial differences due to acclimatizability.

### (3). The Problem of Culture.

Race is a biological concept which refers to man or the human animal as *Homo sapiens*. Man as the object of an acclimatization study by physical anthropologists is *Homo sapiens*, the biological animal, and often nothing else. As so studied this is purely biological man, free from all influences of culture and, as result, an incomplete being. Acclimatization study of man in this manner refers purely to biological tolerability. But it is obvious that man is both biological and social, and consequently human acclimatization is governed by more complicated factors than simply his biological structure.

Natural environment should be the factor conclusively determining human acclimatization, as long as man has a purely biological meaning.

But the assertion that the acclimatization of mankind defined as including a social meaning would be determined only by natural environment belongs to geographic determinism.

The acclimatization of man is also governed by cultural elements which act on human acclimatization, sometimes advantageously.

ously and sometimes burde somely. For example, the acclimatizability of Southern Chinese is strongly supported by psychological qualities favoring the acceptance of a low social and living standard, while on the other hand the acclimatizability of white settlers in tropical Queensland, Australia, is lessened by the lack of such qualities. In the latter case, acclimatization is supported by such social policies as high wages and protective duties on sugar. (Sapper).

White settlers in the tropics occasionally suffer cultural degeneration in a few generation. They become so-called "Poor Whites", but they are completely acclimatized from a biological point of view. Should we regard such whites as completely acclimatized? Clearly, the neglect of cultural elements in acclimatization research would invalidate the conclusions drawn and make inapplicable any results of investigations made.